

CLAIMS

1. A method of forming a relational database, comprising
mapping a corresponding unique key to each tree component of an Extensible Markup
Language (XML) document, the mapping including forming each of the corresponding unique
keys as associated tree strings, each of the associated tree strings including in corresponding
hierarchical order derived from the tree components a parent, a child, and a descriptor, the parent
being an element, the child being an attribute, and the descriptor being text;
assigning a qualifier to the child as warranted that has a possibility of repeating with
another child sharing the parent in common; and
assigning a further qualifier to the descriptor as warranted that has a possibility of
repeating with another descriptor sharing the child in common.

2. A method as in claim 1, wherein the descriptor is selected from a group consisting of
parsed character data and text signifying an encounter with a CDATA section, the CDATA
section being a text node based on which a parser ignores any XML parsing instructions
encountered within the text node.

3. A method as in claim 1, further comprising reconstructing the XML document to have the
tree components based on the mapping, the reconstructing including interrogating each data row
of the tree strings, and creating appropriate objects that correspond to each of the data rows.

4. A relational database structure, comprising
a database that contains corresponding unique keys mapped to tree components of an
Extensible Markup Language (XML) document, each of the corresponding unique keys being
associated with tree strings, each of the associated tree strings including in corresponding
5 hierarchical order derived from the components a parent, a child, and a descriptor, the parent
being an element, the child being an attribute, and the descriptor being text;
a qualifier assigned to the child as warranted that has a possibility of repeating with
another child sharing the parent in common; and
a further qualifier assigned to the descriptor as warranted that has a possibility of
repeating with another descriptor sharing the child in common.

10 5. A relational database as in claim 4, wherein the descriptor is selected from a group
consisting of parsed character data and text signifying an encounter with a CDATA section, the
CDATA section being a text node based on which a parser ignores any XML parsing instructions
encountered within the text node.

15 6. A relational database as in claim 4, wherein the tree strings are arranged to enable
reconstruction of the XML document so as to have the tree components based on the
corresponding unique keys mapped to the tree components, the reconstruction including an
interrogation of each data row of the tree strings and a creation of appropriate objects that

correspond to each of the data rows.

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